the image allows a larger screen to be employed, than had heretofore been feasible, without losing the benefits of 3-D presentation.

The method described can also serve as a "universal" format for 3-D presentation, by allowing for conversion of previously-produced films into 3-D, in addition to providing an improved 3-D presentation for original motion pictures, intended to be shown according to the invention described. It is compatible with conventional motion picture theater design and operations, and is not limited to special venues. It also provides for conversion of films made in other film formats into the 70mm film format (or even formats such as 35mm, with some reduction of benefits, compared to 70mm presentation). The preferred embodiment of the invention, as described, should be thought of as illustrative and not limiting. Other embodiments are possible, and should be considered as lying within the scope of the invention.

THE INVENTION CLAIMED IS:

1. A method for producing and exhibiting motion pictures to produce a three-dimensional effect upon the viewers of said motion pictures, said method comprising:
    a. photographing or otherwise preparing stereoscopic images for combination into motion picture films;
    b. storage of such images onto successive frames of motion picture film, with an image intended to be seen by the left eye of each of said viewers placed side-by-side with a complimentary image intended to be seen by the right eye of each of said viewers;

c. preparation of motion picture films with images stored according to the format described for motion picture exhibition on single strips of motion picture film;

d. exhibition of said motion picture films through a motion picture projector at a frame rate higher than that employed in conventional motion picture exhibition systems and through a single-bladed shutter, said projector also being capable of pulldown of film between frames at a faster speed than that employed by conventional motion picture projectors.

2. The method as in Claim 1, where said images are stored onto said films in the 70mm film format at an aspect ratio as wide as 2.4:1 or narrower, and five perforations per frame.

3. The method as in Claim 2, where said images are anamorphically compressed for storage onto said film frames and anamorphically expanded upon projection to resume the aspect ratio in which said images were originally recorded.

4. The method as in Claim 1, where projection of said motion picture films proceeds at the rate of forty-eight or more frames per second.

5. The method as in Claim 4, where projection of said motion picture films proceeds at a rate selected from the group consisting of forty-eight, fifty or sixty frames per second.

6. The method as in Claim 1, where the blade of said shutter subtends ninety degrees of arc or less.

7. The method as in Claim 1, where the time required for pulldown between frames of said films is five milliseconds or less.

8. The method as in Claim 1, where film images originally photographed or otherwise prepared in aspect ratios other than those intended for exhibition of said films are converted by anamorphic compression or expansion to the aspect ratio at which said films are exhibited, for storage on said film frames.

9. The method as in Claim 1, further comprising the conversion of motion picture films originally photographed at twenty-four frames per second for exhibition according to the method described in Claim 1, in which synthesized motion picture images are interpolated between frames of the motion picture as originally produced.

10. The method as in Claim 9, in which such synthesized motion picture images depict a state of appearance approximately halfway between the appearance of the previous image and the appearance of the next image in sequence.

11. The method as in Claim 10, in which such synthesized motion picture images are formulated by using computerized image techniques.

12. An apparatus for projection of motion pictures for delivery of a three-dimensional effect upon the viewers of said pictures in theaters designed for exhibition of said motion pictures, comprising a light source, a single-bladed shutter, a means for accomplishing pulldown of films from one frame to the next frame in succession in five milliseconds or less, and a means for projecting forty-eight or more frames of motion picture film during each second.

13. The apparatus as in Claim 12, further comprising a metallic screen upon which said motion picture images are projected.

14. The apparatus as in Claim 13, in which said screen features a gain of a factor of two or more.

15. A method for producing and exhibiting motion pictures to deliver a three-dimensional effect to the viewers of said motion pictures, where the improvement comprises the exhibition of said pictures at a frame rate of at least forty-eight frames per second, through a single-bladed shutter, on a projector capable of accomplishing pulldown of film from one frame to the next in five milliseconds or less, onto a screen with a gain of at least a factor of two.